

APPENDIX E

Figures for Cumulative Frequency Distribution Dissolved Oxygen (DO) Assessment Analyses
and Tables for Chlorophyll *a* (Chl*a*) Assessment Analyses

How to Read the CFD Reference/Attainment Curve Graphs: Following the adopted CBP Reference Curve below (Fig. 1-E), Figures 2E-7E are graphs expressing time (vertical axis) and volume (horizontal axis) from 0-100% (the entire area of the graph). Where the Model Monthly Attainment Curve is below the Reference Curve, as in Figure 3-E, there is depicted a “non-allowable” exceedance of 0% (*i.e.*, the criterion is attained). Where the Attainment Curve is above the Reference Curve, there is depicted a certain percentage of “non-allowable” criteria exceedance. This percentage is calculated both for time (vertically) and volume (horizontally) as that area between the two curves taken as a fraction of the total time-volume expressed by the entire area of the graph (100% of time and volume). So, for example, in Figure 4-E, the area between the Reference Curve and the higher line of the Attainment Curve equals 5% of the entire time and space depicted, and is therefore considered to represent a criteria exceedance of 5%.

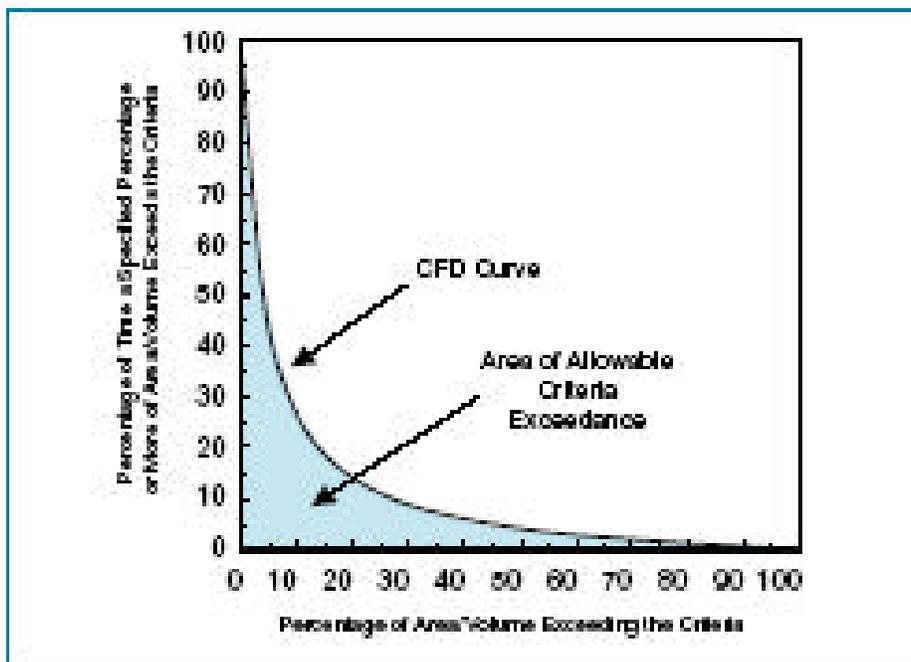


Figure E-1: CBP DO Criteria Reference Curve for Defining Criteria Attainment in the Migratory Fish Spawning and Nursery Use and Open Water Designated Use Habitats

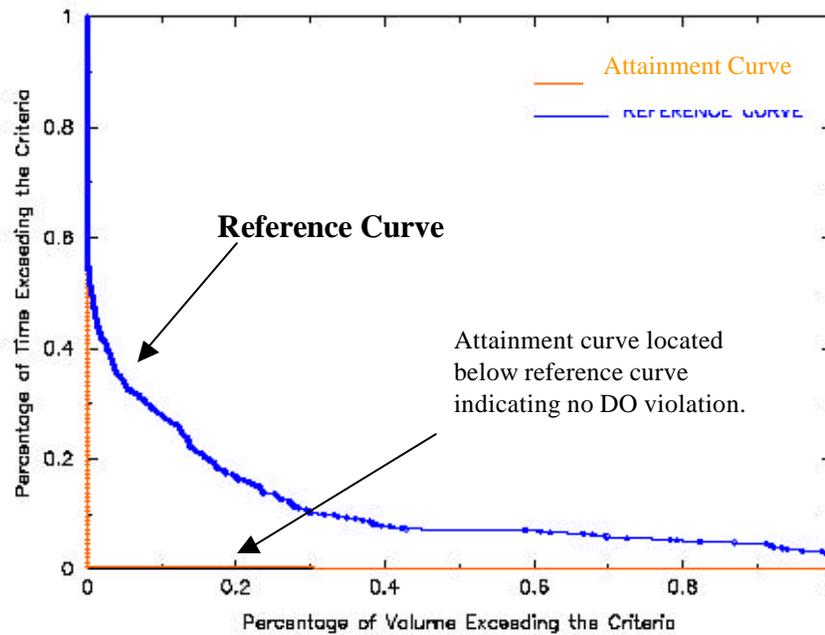


Figure E-2: Baseline Scenario DO Criteria Attainment Assessment for the Migratory Fish Spawning and Nursery Designated Use for the February 1st to May 31st period in the Upper Chester River

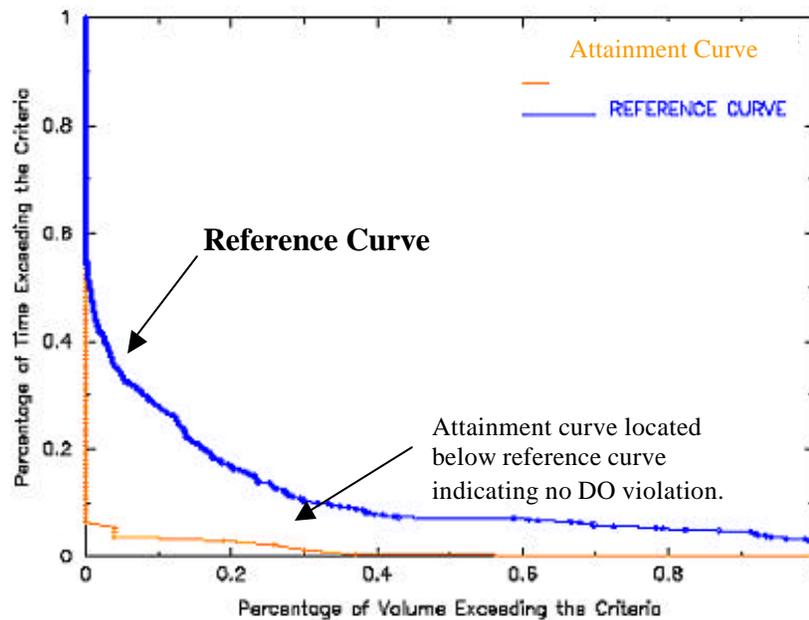


Figure E-3: Baseline Scenario DO Criteria Attainment Assessment for the Migratory Fish Spawning and Nursery Designated Use for the February 1st to May 31st period in the Middle Chester River

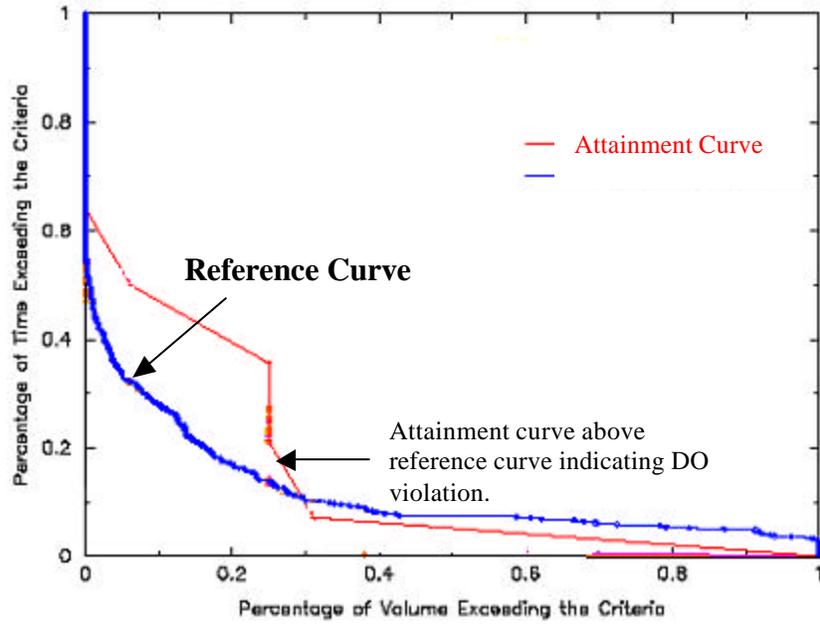


Figure E-4: Baseline Scenario DO Criteria Attainment Assessment for the Open Water Designated Use for June 1st to January 31st period in the Upper Chester River

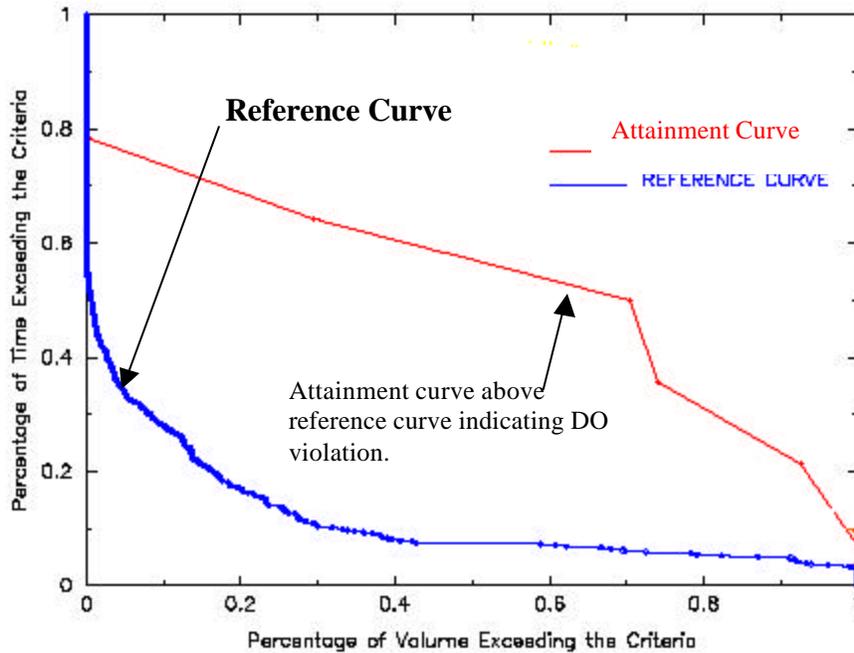


Figure E-5: Baseline Scenario DO Criteria Attainment Assessment for the Open Water Designated Use for June 1st to January 31st period in the Middle Chester River

Table E-1: Upper Chester River Chl_a Analysis Summary for Baseline Conditions Scenario

WQ Cells	Maximum value (based on 30- day rolling average)	Percent of time greater than 50 ug/l (based on 30-day rolling average)
40001	64.57	19%
40002	64.73	29%
40003	64.07	33%
40004	66.03	37%
40005	57.75	40%
40006	58.06	23%
40007	58.04	14%
40008	57.90	11%

Table E-2: Middle Chester River and Morgan Creek Chl_a Analysis Summary for Baseline Conditions Scenario

WQ Cells	Maximum value (based on 30-day rolling average)	Percent of time greater than 50 ug/l (based on 30-day rolling average)
40009	63.01	14%
40010	66.32	14%
*43010	84.13	33%
*42010	82.12	26%
*41010	74.45	19%
40011	63.87	13%
40012	56.94	6%
40013	<50.00	0%
40014	<50.00	0%
40015	<50.00	0%
40016	<50.00	0%
40017	<50.00	0%
40018	<50.00	0%
40019	<50.00	0%
40020	<50.00	0%

* Morgan Creek Cells

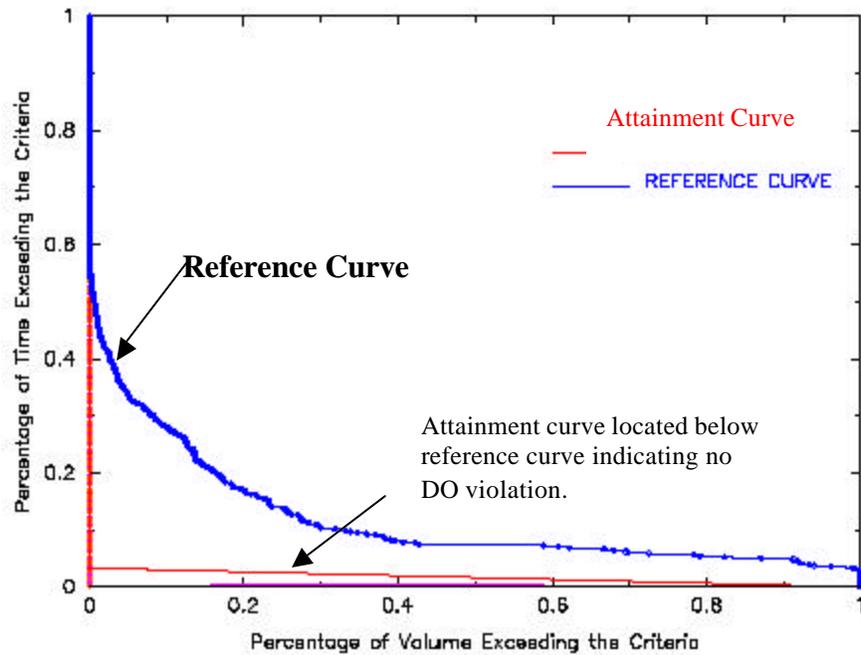


Figure E-6: TMDL Scenario DO Criteria Attainment Assessment for the Open Water Designated Use for the June 1st to January 31st period in the Upper Chester River.

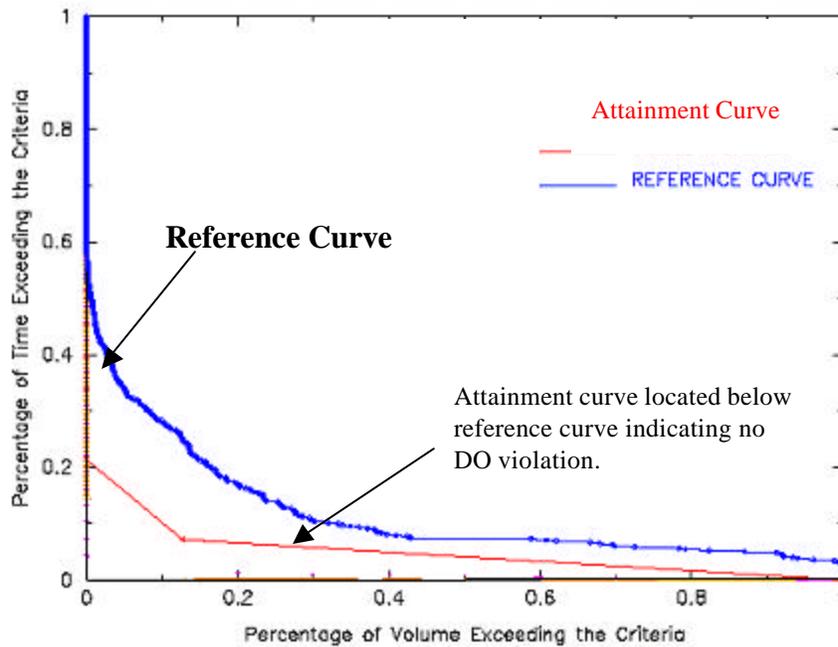


Figure E-7: TMDL Scenario DO Criteria Attainment Assessment for the Open Water Designated Use for the June 1st to January 31st period in the Middle Chester River

Table E-3: Upper Chester River Chl_a Analysis Summary for TMDL Conditions Scenario

WQ Cells	Maximum value (based on 30-day rolling average)	Percent of time greater than 50 ug/l (based on 30-day rolling average)
40001	56.62	13%
40002	55.74	8%
40003	53.24	6%
40004	51.72	4%
40005	<50.00	0%
40006	<50.00	0%
40007	<50.00	0%
40008	<50.00	0%

Table E-4: Middle Chester River and Morgan Creek Chl_a Analysis Summary for TMDL Scenario Conditions

WQ Cells	Maximum value (based on 30-day rolling average)	Percent of time greater than 50 ug/l (based on 30-day rolling average)
40009	<50.00	0%
40010	<50.00	0%
*43010	61.47	18%
*42010	60.97	15%
*41010	53.24	9%
40011	<50.00	0%
40012	<50.00	0%
40013	<50.00	0%
40014	<50.00	0%
40015	<50.00	0%
40016	<50.00	0%
40017	<50.00	0%
40018	<50.00	0%
40019	<50.00	0%
40020	<50.00	0%

* Morgan Creek Cells